

**Dr. Duke's Phytochemical and Ethnobotanical Database**

**Chemicals Found in *Althaea officinalis***

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
32	AESCULETIN	Shoot	--	--		
32	AESCULETIN	Root	--	--		
33	AESCULIN	Shoot	--	--		
33	AESCULIN	Root	--	--		
3	ALANINE	Root	--	--		
1	ALTHAEA-MUCILAGE-O	Root	--	2200		
5	ALUMINUM	Root	73	680	0.052378446056560675	
6	ARABINOGLACTAN	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
112	ASCORBIC-ACID	Root	177	1640	0.29152337636866393	
112	ASCORBIC-ACID	Seed	--	1640	0.6461153960063319	
2	ASPARAGINE	Root	10000	20000	-1.2247448713915892	
7	ASTRAGALIN	Flower	--	--		
7	ASTRAGALIN	Leaf	--	--		
53	BETA-CAROTENE	Root	--	--		
14	BETAINE	Root	40000	40000	2.8276326231219104	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
6	BUTYRIC-ACID	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
102	CAFFEIC-ACID	Flower	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
102	CAFFEIC-ACID	Root	--	--		
102	CAFFEIC-ACID	Leaf	--	--		
28	CALCIUM	Root	881	8160	0.08292658679020891	
4	CALCIUM-OXALATE	Plant	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
77	CHLOROGENIC-ACID	Root	--	--		
77	CHLOROGENIC-ACID	Flower	--	--		
77	CHLOROGENIC-ACID	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
20	CHOLINE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
24	CHROMIUM	Root	0.2	1.5	-0.26097057892644915	
2	COBALT	Root	0.4	3.3	-0.473581959958559	
57	COUMARIN	Root	--	--		
57	COUMARIN	Shoot	--	--		
2	ERUCIC-ACID	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
61	FERULIC-ACID	Leaf	--	--		
61	FERULIC-ACID	Flower	--	--		
61	FERULIC-ACID	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
61	FERULIC-ACID	Root	--	--		
15	FIBER	Root	83000	83000	-0.11352696502722416	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	GLUCOSE	Plant	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals</i> . The Pharmaceutical Press, London. 296pp.
12	HERNIARIN	Root	--	--		
12	HERNIARIN	Shoot	--	--		
6	IRON	Root	12	115	-0.2745822990554713	
22	ISOQUERCITRIN	Leaf	--	--		
22	ISOQUERCITRIN	Flower	--	--		
1	ISOSCOPOLETIN	Shoot	--	--		
1	ISOSCOPOLETIN	Root	--	--		
75	KAEMPFEROL	Leaf	--	--		Williamson, E. M. and Evans, F. J., <i>Potter's New Cyclopaedia of Botanical Drugs and Preparations</i> , Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
75	KAEMPFEROL	Root	--	--		
20	LECITHIN	Root	--	--		List, P.H. and Horhammer, L., <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
27	LINOLEIC-ACID	Seed	67710	91000	-0.13813658130464232	Wealth of India.
65	MAGNESIUM	Root	559	5180	1.3932916970467093	
14	MANGANESE	Root	0.5	4.4	-0.49333327298005497	
3	MANNOSE	Plant	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals</i> . The Pharmaceutical Press, London. 296pp.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	MUCILAGE	Root	50000	350000	1.8163629857243206	
3	MUCILAGE	Plant	--	210000	0.7288213596117523	
3	MUCILAGE	Leaf	60000	157000	1.32247213063027	
39	NIACIN	Root	3.4	31	-0.5575871529684362	
18	OLEIC-ACID	Seed	39425	52975	-0.5436146073153726	Wealth of India.
25	P-COUMARIC-ACID	Leaf	--	--		
25	P-COUMARIC-ACID	Root	--	--		
25	P-COUMARIC-ACID	Flower	--	--		
13	P-HYDROXY-BENZOIC-ACID	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
13	PALMITIC-ACID	Seed	12415	16685	-0.3553353614139409	Wealth of India.
4	PARAFFIN	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
24	PECTIN	Root	110000	350000	1.9565371321871459	
4	PHOSPHORUS	Root	277	2560	-0.1682843400899607	
2	PHYTOSTEROLS	Root	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
14	POTASSIUM	Root	1307	12100	-0.26937312186003615	
43	PROTOCATECHUIC-ACID	Leaf	--	--		
43	PROTOCATECHUIC-ACID	Flower	--	--		
176	QUERCETIN	Root	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
176	QUERCETIN	Leaf	--	--		Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
2	QUERCETIN-3'-GLUCOSIDE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
15	RIBOFLAVIN	Root	0.1	0.5	-0.7822614262336574	
34	SALICYLIC-ACID	Flower	--	--		
34	SALICYLIC-ACID	Root	--	--		
34	SALICYLIC-ACID	Leaf	--	--		
5	SAPONINS	Root	--	--		
44	SCOPOLETIN	Flower	--	--		
44	SCOPOLETIN	Root	--	--		
44	SCOPOLETIN	Leaf	--	--		
44	SCOPOLETIN	Shoot	--	--		
3	SCOPOLIN	Shoot	--	--		
3	SCOPOLIN	Root	--	--		
60	SELENIUM	Root	0.4	3.3	-0.12770210212970026	
4	SILICON	Root	0.3	3	-0.32912368458456387	
9	SINAPIC-ACID	Flower	--	--		
9	SINAPIC-ACID	Leaf	--	--		
1	SODIUM	Root	148	1370	0.12512006272941759	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
11	SORBITOL	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
4	SPIRAEOSIDE	Leaf	--	--		
4	SPIRAEOSIDE	Flower	--	--		
5	STARCH	Root	39960	370000	0.2269958278173157	
8	STEARIC-ACID	Seed	12415	16685	-0.20338219754526743	Wealth of India.
14	SUCROSE	Plant	--	--		Wealth of India.
6	SYRINGIC-ACID	Root	--	--		
6	SYRINGIC-ACID	Leaf	--	--		
6	SYRINGIC-ACID	Flower	--	--		
35	TANNIN	Root	20000	20000	-1.7590478728926933	
31	THIAMIN	Root	1	1	-0.5047871686237749	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
3	TILIROSIDE	Flower	--	1900		
3	TILIROSIDE	Leaf	--	2500		
4	TIN	Root	3	29	1.2720232250646093	
22	UMBELLIFERONE	Shoot	--	--		
22	UMBELLIFERONE	Root	--	--		
3	VALINE	Root	--	--		
24	VANILLIC-ACID	Leaf	--	--		
24	VANILLIC-ACID	Flower	--	--		

<b>Activity Count</b>	<b>Chemical</b>	<b>Plant Part</b>	<b>Low PPM</b>	<b>High PPM</b>	<b>StdDev</b>	<b>Reference Citation</b>
24	VANILLIC-ACID	Root	--	--		
3	XYLOSE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
77	ZINC	Root	--	--		